

ABSTRACT

A semiconductor bridge (SCB) device. In one embodiment, the SCB device includes a laminate layer on top of an insulating material, wherein the laminate layer comprises a series of layers of at least two reactive materials, and wherein the laminate layer comprises two relatively large sections that substantially cover the surface area of the insulating material, and a bridge section joining the two relatively large sections. At least one conductive contact pad is coupled to at least one of the series of layers, wherein a predetermined current through the conductive contact pad causes the bridge section to initiate a reaction in which the laminate layer is involved. In one embodiment, the SCB device includes an integrated diode formed by an interface of the insulating material with another material, such as a metal.